

DIRECT TESTIMONY

of

GREG ROCKROHR

Energy Engineering Program

Safety and Reliability Division

Illinois Commerce Commission

Commonwealth Edison Company

Application for a Certificate of Public Convenience and Necessity, pursuant to Section 8-406 of the Act, to install, operate and maintain a new 138,000 kilovolt electric transmission line and a new substation in Will and Cook Counties, Illinois.

Docket No. 12-0431

October 3, 2012

1 **Q. Please state your name and business address.**

2 A. My name is Greg Rockrohr. My business address is 527 East Capitol Avenue,
3 Springfield, Illinois 62701.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by the Illinois Commerce Commission (“Commission”) as a
6 Senior Electrical Engineer in the Safety & Reliability Division. In my current
7 position, I review various planning and operating practices at Illinois electric
8 utilities and provide opinions or guidance to the Commission through Staff
9 reports and testimony.

10 **Q. What is your previous work experience?**

11 A. Prior to joining the Commission Staff (“Staff”) in 2001, I was an electrical
12 engineer at Pacific Gas and Electric Company in California for approximately 18
13 years. Prior to that, I was an electrical engineer at Northern Indiana Public
14 Service Company for approximately 3 years. I am a registered professional
15 engineer in the state of California.

16 **Q. What is your educational background?**

17 A. I hold a Bachelor of Science degree in Electrical Engineering from Valparaiso
18 University. While employed in the utility industry and at the Commission, I have
19 attended numerous classes and conferences relevant to electric utility
20 operations.

21 **Q. What is the purpose of your testimony?**

22 A. On July 17, 2012, Commonwealth Edison Company (“ComEd”) filed a petition
23 requesting that the Commission grant it a Certificate of Public Convenience and

Necessity ("CPCN") pursuant to Section 8-406 of the Illinois Public Utilities Act (the "Act") to construct, operate, and maintain a new 4.8 mile long 138 kilovolt ("kV") transmission line within its service territory in Will and Cook Counties – southwest of Chicago. My testimony provides the Commission with additional information and my recommendation regarding ComEd's request.

Q. Do you recommend that the Commission grant ComEd the CPCN it requests?

A. Yes. Following my review of available information about ComEd's proposed project, and my inspection of the route that ComEd plans to use, I have concluded that the Commission should grant ComEd the CPCN it requests in its July 17, 2012, petition.

Q. What criteria did you use to reach your conclusion that the Commission should grant AmerenCIPS a CPCN pursuant to Section 8-406 of the Act?

A. I used the criteria included within Section 8-406 of the Act, which states, in relevant part:

The Commission shall determine that proposed construction will promote the public convenience and necessity only if the utility demonstrates: (1) that the proposed construction is necessary to provide adequate, reliable, and efficient service to its customers and is the least-cost means of satisfying the service needs of its customers or that the proposed construction will promote the development of an effectively competitive electricity market that operates efficiently, is equitable to all customers, and is the least cost means of satisfying those objectives; (2) that the utility is capable of efficiently managing and supervising the construction process and has taken sufficient action to ensure adequate and efficient construction and supervision thereof; and (3) that the utility is capable of financing the proposed construction without significant adverse financial consequences for the utility or its customers. (220 ILCS 5/8-406)

I first examined whether ComEd demonstrated that it needs a project to provide adequate, reliable, and efficient service to its customers. After I determined some type of project was necessary to satisfy the service needs of its customers, I then examined whether ComEd's construction of the specific facilities it proposed in its petition would be the least-cost means for ComEd to satisfy the service needs of its customers. Finally, I evaluated whether ComEd is capable of efficiently managing and supervising the construction process if the Commission were to grant ComEd the CPCN it requests. Staff witness Janis Freetly (Staff Ex. 2.0) discusses the third criteria identified in the above excerpt from Section 8-406 of the Act: whether constructing the proposed substation and transmission line will result in significant adverse financial consequences for ComEd or its customers.

Q. Why does ComEd need to build the 138-12.5 kV substation and 138 kV transmission line that it proposes with its petition?

A. ComEd explains that it presently supplies electricity to its customers in and around the City of Lockport and the Villages of Homer Glen and New Lenox with its 34 kV subtransmission system. Despite the economic downturn, data that ComEd provided indicates that load has continued to grow in the subject area, and that if ComEd does not construct the 138 kV project it is proposing in this docket, or some alternative project, then portions of its 34 kV system will experience overloads and low voltage beginning in 2014.¹ I found the assumptions ComEd made regarding future customer load projections and the concerns that ComEd expressed in its petition and testimony regarding overloads

¹ Petition p. 2, ComEd Ex. 1.0, at 16-18.

and low voltage to be realistic. In summary, I agree with ComEd's analysis that indicates it needs to take steps, prior to 2014, to avoid 34 kV system overloads by increasing available capacity in and around the City of Lockport and the Villages of Homer Glen and New Lenox, and to maintain proper voltages for its customers in this area.

Q. Why did you conclude that ComEd should construct the 138-12.5 kV substation that it proposes in order to meet the future needs of its customers?

A. ComEd proposes building a new 138-12.5 kV distribution substation on vacant land east of Lockport that it already owns. I found that the property ComEd plans to use for its new distribution substation, near the southeast corner of the 167th Street crossing of Interstate 355, is a logical location for a distribution substation. This location will facilitate ComEd's installation of new 12.5 kV distribution circuit outlets in multiple directions to supply area customers in order to relieve its heavily-loaded 34 kV system. I also concluded that the route that ComEd proposes to use for its new 138 kV transmission line is the best route available.

Q. How did you arrive at this conclusion regarding ComEd's route selection for its proposed 138 kV transmission line?

A. After reviewing ComEd's petition, testimony, and responses to data requests, I conducted a field inspection of the route over which ComEd proposes to install its proposed 138 kV transmission line. I found that ComEd's proposal represents the shortest and most direct route between its proposed substation site and any existing 138 kV source. The proposed route from the new substation site lies

101 directly north along Interstate 355, which is operated by the Illinois Tollway
102 Authority. ComEd's proposal would route the entire new 138 kV transmission
103 line over property that either ComEd owns, adjacent to its proposed substation
104 site or existing public right-of-way controlled by the Illinois Tollway Authority.
105 ComEd indicates that it anticipates no complications obtaining a right-of-way
106 from the Illinois Tollway Authority. ComEd is not at this time requesting eminent
107 domain authority, since it will require additional land rights from only 13
108 landowners, other than the Illinois Tollway Authority, for overhang and blow-out
109 only (not for structures), and expects to obtain those rights through negotiation.²

110 **Q. Did you review any alternative route(s) that ComEd could use for its**
111 **proposed 138 kV transmission line instead of the route it proposes?**

112 A. Yes. During my field route inspection on September 6, 2012, I also inspected
113 two other routes that ComEd could conceivably use to tap existing 138 kV
114 facilities for its new substation: one to the south and one to the west. In both
115 cases, the 138 kV transmission line would be longer and more expensive than
116 the route ComEd proposes, and the number of landowners affected and rights-
117 of-way required would be significantly greater. My observations during my
118 review of these alternative routes caused me to conclude that ComEd has
119 proposed the least-cost and best route to supply its new 138-12.5 kV substation,
120 pursuant to the directives in Section 8-406 of the Act.

121 **Q. Has ComEd notified, or will it notify, potentially affected landowners,**
122 **government agencies, and other entities of its plans to build the**
123 **transmission line?**

² ComEd Ex. 3.0, at 4-6.

124 A. Yes. ComEd states that it has already sent letters to landowners pursuant to
125 Part 300 of the Commission's Administrative Rules. ComEd also states it has
126 notified government officials, government agencies, railroads, utilities, and
127 telecommunications companies in the area about the project, and that it has
128 already confirmed that the transmission line will not conflict with any aviation
129 activity over which the Federal Aviation Authority has jurisdiction. ComEd also
130 states the lines will not remove any agricultural land from cultivation, and will not
131 impact any designated wetlands. In addition, ComEd commits to notifying the
132 Illinois Historical Preservation Agency and applying for all necessary road
133 crossing permits prior to construction.³ In response to Staff discovery, ComEd
134 also provided evidence that the Illinois Department of Natural Resources has
135 confirmed that no endangered or threatened species would be impacted by its
136 proposed project.

137 **Q. Rather than constructing a new 138 kV transmission line and 138-12.5 kV**
138 **substation, could ComEd instead provide more capacity to the areas in and**
139 **around the City of Lockport and the Villages of Homer Glen and New Lenox**
140 **by reinforcing its existing 34 kV facilities and existing 34-12.5 kV**
141 **substations?**

142 A. Yes, but ComEd's 138 kV proposal is superior. ComEd determined that to
143 provide adequate and reliable service to its customers by reinforcing its 34 kV
144 facilities, it would need to add a new 138-34 kV substation and five new 34-12.5
145 kV substations (six substations total), as well as add four new 34 kV circuits ("34
146 kV Alternative"). ComEd's cost studies indicate that the net present value for the

³ ComEd Ex. 3.0, at 5-6.

147 proposed 138 kV project is \$38 million, compared to \$57 million for this 34 kV
148 Alternative project.⁴ Furthermore, it is my opinion that, since the 34 kV project
149 would entail installing more facilities on wooden poles adjacent to surface streets
150 and local highways, the 34 kV Alternative would be inherently less reliable due to
151 the additional exposure of those facilities. Also, installing so many additional 34
152 kV circuits and 34-12.5 kV substations in and around developed areas is likely to
153 be more objectionable to area landowners and residents than adding 138 kV
154 structures within the existing Illinois Tollway Authority's right-of-way.

155 **Q. Is ComEd capable of efficiently managing and supervising the construction**
156 **of the 138 kV transmission line it proposes to build?**

157 A. In my opinion, yes. In paragraph 13 of its petition, ComEd states it is capable of
158 efficiently managing and supervising construction of the project. ComEd's
159 service territory covers the northern third of Illinois. ComEd has constructed, and
160 maintains, hundreds of miles of transmission lines in the state. I have no reason
161 to doubt ComEd's assertion that it is capable of efficiently managing and
162 supervising the construction of the proposed 138-12.5 kV substation and 138 kV
163 transmission line that it proposes with its petition.

164 **Q. Does this conclude your prepared direct testimony?**

165 A. Yes.

⁴ ComEd Ex. 1.0, at 30-32.